Question

Update the number of CLECs testing and going into production using the SATE and interoperability environments.

Answer

The following table provides current counts for CLECs who are in production and have used one or both of the Qwest IMA-EDI Test Environments. The details for these totals are set forth in Confidential Attachment A.

Test Environment	**Notarianni OSS Declaration (data as of 05/01/02)**	**Current (data as of 07/09/02)****
Interoperability	26	27
SATE	5 Individual CLECs 5 CLECs Through Service Bureau	11 Individual CLECs 5 CLECs Through Service Bureau
Total # CLECs*	29	31

* CLECs may have used one or both of the Interoperability & SATE Test Environments across releases tested. Therefore the 'Total' count of CLECs is **not** equal to the sum of the number of CLECs testing in Interoperability & SATE in the columns labeled 'Notarianni OSS Declaration' and 'Current'.

** The numbers in this column were the same as of June 1, 2002.

There are also 4 CLECs who are currently in the process of using SATE to test IMA-EDI but have not completed the testing and are therefore not reflected in the "Current Individual CLEC" numbers above. One of these four CLECs, which is currently using SATE and is doing its own testing, has previously used a Service Bureau and is counted in the "Current CLECs through Service Bureau" number above.

The Pseudo-CLECs in both the ROC and Arizona OSS tests certified across multiple EDI releases using the Interoperability Test Environment for use in submitting functionality test transactions. In the Arizona OSS Test, HP also did an independent evaluation and certified using the SATE test environment across multiple releases. These counts are not included in the table above.

Additionally NightFire, a third party software vendor that develops EDI software for use by the CLECs, has also utilized SATE across multiple releases in support of its software development. *See* Attachment B, which is a letter from NightFire to Jeff Thompson of Qwest, dated 6/27/02. Nightfire is not included in the counts above.

Attachment A
Number of CLECs Certification Testing in Interoperability Environment and SATE
(As of July 9, 2002)

CLEC	Release	Production Date	Products	Interop/ SATE

NightFire
Igniting the Bandwidth Explosion™

Jeff Thompson
Director, Wholesale IT
Qwest Communications
1005 17th Street
Denver, CO 80202

Date: June 27th, 2002

Re: IMA testing at Qwest

Mr. Thompson:

This letter confirms that NightFire Software has successfully tested in Qwest's Stand Alone Test Environment (SATE) and production systems on behalf of at least 5 Competitive Local Exchange Carriers (CLECs). NightFire has used SATE to test numerous pre-order and order transactions and have found that when a product is supported in SATE as well as in production, SATE mirrors the production environment. SATE has improved NightFire's ability to automate and manage EDI interfaces into Qwest. These interfaces connect Qwest to its CLEC trading partners and allow CLECs to have fully automated interfaces requiring little to no manual intervention.

Utilizing Qwest's SATE environment, NightFire has tested the last two major IMA releases (IMA 8.0 and 9.0) and will continue using it for future IMA releases to facilitate the testing of any new product, protocol, and business rule changes. NightFire has tested the following Qwest products in SATE:

- Resale POTS
- Unbundled Loop
- Number Portability
- Loop with Number Portability
- Directory Listings Only (Resale)
- Unbundled Distribution Loop (Sub-loop)
- Sub-loop with Number Portability
- Line Sharing
- UNE-P POTS

The SATE environment has allowed NightFire to test IMA releases and verify the functionality of the Qwest interface and NightFire's software prior to taking mutual customer's into production. NightFire has worked very closely with Qwest over the past year to define and improve the functionality of the SATE environment so that the needs of CLECs and vendors like NightFire are met. NightFire Software has provided a variety of CLEC customers and other Communication Service Providers with national LSR interfaces since 1998.

We hope this information is helpful. NightFire would be willing to discuss this information in more detail with the FCC, as needed.

Respectfully,

Venkatesh Swaminathan
Founder, Executive Vice President, and Chief Strategist

Question

Identify the number of manually processed orders that receive non-fatal error responses.

Answer

The table below displays the number of manually-handled LSRs that received a non-fatal error notice from January through May 2002. These numbers represent from approximately three-quarters of a percent to less than three percent of the total volume of manually-handled LSRs.

	Jan-02	Feb-02	Mar-02	Apr-02	May-02
CO	149	157	104	157	171
IA	74	111	76	101	120
ID	12	13	5	9	13
ND	20	32	25	21	26
NE	31	22	23	13	12
5 State Total	286	335	233	301	342

Question

Identify the number of one-on-one sessions involving training coaches to address errors found on service orders; describe one or two examples of trend-spotting by coaches and the follow-up action items that resulted; and provide documentation regarding application date accuracy for both manual and flow-through orders.

Answer

For the months of May-June '02, Qwest conducted 182 one-on-one review sessions to address errors found on service orders. Two examples of types of common errors found and the actions taken to address those errors are provided here.

Qwest center managers (coaches) identified issues with the completion of all required fields on complex resale orders. Individual order typists received one-on-one coaching regarding this issue. In addition, the process specialist for this area was alerted and issued a general notice, known as a Multi-Channel Communicator or MCC, to the center employees, both coaches and typists. This MCC, like all MCCs, was reinforced in team meetings by the coaches with the typists. Qwest's process specialists identified an issue with the population of the PON field on complex resale orders. The process specialists determined that the occurrences of this issue warranted that training be conducted for the Complex Resale typing team. The process specialists made arrangements with the Sr. Corporate Trainer to conduct a complex resale refresher-training course for the entire typing team during the month of June.

An additional request was for the application date accuracy information provided to the DOJ. The following table provides the latest information that was provided to the DOJ concerning application date accuracy. This updated table, modified to include May data for Resale POTS and UNE-P POTS, was filed on 7/17/02.

	Mar-02		Apr-02		May-02	
	# Orders Sampled	APP Accuracy	# Orders Sampled	APP Accuracy	# Orders Sampled	APP Accuracy
Resale POTS	226	96.0%	195	99.0%	163	97.5%
UNE-P POTS	146	97.3%	138	98.6%	200	94.5%
Combined Resale POTS/ UNE-P POTS	372	96.5%	333	98.8%	363	95.9%
UBL	383	98.2%	365	99.5%	363	TBD

Question

Are EELs volumes increasing and are these UNEs being provisioned on time?

Answer

Regional (14-State) data shows that EEL volumes have increased substantially over the last few months. Specifically:

Month[4]	**Number of new EELs orders**
January 02	50
February 02	65
March 02	99
April 02	176
May 02	219
June 02	220

Qwest's performance in provisioning EELs over the last several months has generally improved, despite the increasing volumes. Specifically, combined Zone 1 (OP-3D) and Zone 2 (OP-3E) performance data shows the following:

Month	Number of EELs Commitments Met	Number of EELs that Meet OP-3 Requirements	Percentage of Commitments Met (against 90% benchmark)
January 02	25	32	78.1%
February 02	37	52	71.2%
March 02	79	89	88.8%
April 02	169	189[5]	89.4%
May 02	130	157	82.8%
June 02	129	148	87.2%

It is also interesting to note that the average installation interval (OP-4D and OP-4E) from January 2002 forward has ranged from 5.6 days to 10.9 days. This is substantially faster than Qwest provisions DS1 private lines to retail as reflected in retail comparative data for DS1 Capable Loops. Those retail intervals range

[4] This data is based on the new service installation quality metric (OP-5), which identifies an average of all new orders. This is more inclusive than the percentage of commitments met (OP-3), because that measure has agreed upon exclusions. Nonetheless, the data from OP-3 is central to measuring how well Qwest performs, and the remainder of the data in this response is based on performance from OP-3D (Zone 1) and OP-3E (Zone 2) added together.

[5] Note that this number is slightly higher than that in the OP-5 data. That is because the denominator of OP-5 consists of the average of the current and previous months volumes of installed orders.

from 12.8 days to 19.2 days. Thus, while the percentage of commitments met is slightly below the 90% benchmark, on average CLECs obtain EELs in intervals substantially shorter than the most similar retail product. This performance provides CLECs with a meaningful opportunity to compete.

Question

Provide 5-state aggregate or regional data for the following PIDs:

1. Analog Loop, Installation Commitments Met (OP-3) and Installation Interval (OP-4) for circumstances reported under the "no dispatch" and "dispatch within MSA" disaggregations.
2. Line Sharing Repair generally (MR-3, MR-4 and MR-6).
3. Conditioned Loops, Installation Commitments Met (OP-3).
4. Resold Basic Rate ISDN, Installation Interval (OP-4) for circumstances reported under the "no dispatch" category.
5. Resold Centrex 21, Installation Interval (OP-4) with "no dispatch.
6. Resold DS1, New Service Installation Quality, (OP-5).
7. Trouble Rate (MR-8) for dark fiber loop and dark fiber IOF.

Each will be discussed separately. Moreover, attached hereto is a 5-State report that addresses each of the aforementioned questions. *Exhibit 1* is in PID format and *Exhibit 2* in checklist format.

Answer

1. ***Provide analog loop installation performance data and explain why a limited volume of Analog Loop Installation (OP-3 and OP-4) is reported in the non-design no dispatch and technician dispatch categories rather than in the design service, zone disaggregations.***

The issue here concerns how well Qwest is providing analog loops to CLECs in each of the five application states. The chart below shows that Qwest provisions analog loops to CLECs in each of the five states at a level exceeding the ROC's 90% benchmark. In each state except Nebraska, Qwest met over 97% of its analog loop commitments. This performance is extremely strong.

Nonetheless, the FCC has asked Qwest to focus on the analog loops in the non-design category. There are a few analog loops reported in OP-3A (dispatches within MSAs) and OP-3C (no dispatches). Qwest has been asked to explain this performance. The only state in this Application that this issue truly affects is Colorado. A very small percentage of analog loops are reported in the non-design categories of performance (no dispatch, dispatch within MSAs and dispatches outside of MSAs), as compared to the design categories (Zones 1 and 2). As the chart below reflects, these loops represent 0.1% of analog loops for the five states involved in this application and 0.05% of analog loops throughout the region. The placement of analog loops in these non-design categories is in error. All analog loops currently being ordered should be within the design, zone disaggregations (OP-3D and E). Qwest is in the process of creating a programming fix to eliminate this slight issue. The programming fix will

first be reported in the August performance report containing July 2002 performance data.

Nonetheless, the number of analog loops affected by this classification error is so small as to render the issue irrelevant. This issue affects commitments met (OP-3) by 0.1%. Similarly, the average installation interval (OP-4) is affected by 0.01 day. Thus, the data contained within the design disaggregations (OP-3D & E and OP-4D & E) are an accurate reflection of Qwest's actual performance in each of the five states.

State[6]	No. of analog loops in the non-design (dispatch) categories	No. of analog loops in the design (zone) categories	OP-3 (Avg.) From the design (zone) categories	Percent of the overall analog loop volume represented by the non-design (dispatch) categories
Colorado	34	16,373	99.05%	0.23%
Idaho	0	1,966	97.97%	0.00%
Iowa	0	12,097	98.37%	0.00%
Nebraska	1	4,298	90.27%	0.02%
North Dakota	0	4,009	97.06%	0.00%
5-State Avg.	35	38,743	97.60%	0.10%
Regional	53	99,643	98.07%	0.05%

2. Describe Qwest's line-sharing repair performance.

Line-sharing repair performance is discussed in the affidavits of Ms. Karen Stewart (Line Sharing at ¶¶ 46-47) and Mr. Michael Williams (Commercial Performance at ¶¶ 247-249). Specifically, Qwest reports performance for line sharing repair under three principal PIDs: (1) out of service troubles cleared within 24 hours (MR-3); (2) all reported troubles cleared within 48 hours (MR-4); and (3) mean time to restore (MR-6). Qwest's PIDs define an out of service trouble as "unable to place or receive calls." *See MR-3 Description.* Thus, Qwest has tracked out of service troubles as an inability to place a voice call. Troubles reported by a CLEC on a shared loop tend to concern difficulty with the data transmission. Thus, a very high percentage of the reported line-sharing troubles

[6] Qwest utilizes the numbers in the denominator of OP-4 as they represent the largest number of loops in the "no dispatch" category. For the zone data, however, Qwest utilizes the data from the OP-3 denominator because a fairly substantial percentage of loops are excluded from OP-4 as CLECs request longer than the standard interval.

are "service affecting", not out of service situations, and thus only impact MR-4 and MR-6. The same is not true of voice service where a high percentage of reported troubles are out of service situations and therefore impact MR-3, MR-4 and MR-6. This disparity is shown by the following Colorado and regional performance data.[7] The statistical information for the 5-States combined is provided in the attachment.

[7] Qwest utilizes Colorado and Regional data because there is no repair data from Idaho, Nebraska and North Dakota and only one reported trouble in the last four months in Iowa.

			CLEC Line Sharing Data			Retail		
State	**Month**	**Category**	**Out of Service Troubles (MR-3)**	**All Troubles (MR-4)**	**Percent out of service troubles**	**Out of Service Troubles (MR-3)**	**All Troubles (MR-4)**	**Percent out of service troubles**
Colorado	Jan. 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Jan. 2002	Dis out MSA	0	0	N/A	2,772	3,841	72.17%
Colorado	Jan. 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Feb. 2002	Dis. in MSA	5	18	27.78%	10,136	13,686	74.06%
Colorado	Feb. 2002	Dis out MSA	0	1	0.00%	2,340	3,233	72.38%
Colorado	Feb. 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Mar 2002	Dis in MSA	3	12	25.00%	12,674	16,541	76.62%
Colorado	Mar 2002	Dis out MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Mar 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Apr 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Colorado	Apr 2002	Dis out MSA	0	0	N/A	2,247	3,100	72.48%
Colorado	Apr 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Jan. 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Jan. 2002	Dis out MSA	1	4	25.00%	18,654	27,560	67.69%
Regional	Jan. 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Feb. 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Feb. 2002	Dis out MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Feb. 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Mar 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Mar 2002	Dis out MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Mar 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Apr 2002	Dis. in MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Apr 2002	Dis out MSA	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Regional	Apr 2002	No Dispatch	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
TOTAL	Jan-Apr 02	Combined	129	793	**16.27%**	449,456	697,017	**64.48%**

KEY	**Missed Measures**	**Color Coding**
	MR-3	
	MR-4	[redacted]
	MR-6	
	MR-3 and MR-6	
	MR-4 and MR-6	[redacted]
	MR-3, MR-4, MR-6	[redacted]

This data shows that Qwest retail comparative (POTS residential and business service combined) is four times more likely to have an out of service situation than CLECs over a line shared loop. As described by Karen Stewart and Mike Williams, out of service troubles have a higher priority in the repair queue and a restoration objective of 24 hours, rather than 48 hours. This prioritization means 64% of retail troubles have a higher priority in the repair queue as compared to 16% for CLEC line shared loops. It is not surprising, therefore, that MR-4 and MR-6 (the two measures most often missed) are outside of parity. This is compounded by the fact that, as described by Ms. Stewart and Mr. Williams, line-sharing troubles are more complex to isolate and repair.

Qwest has been researching this issue to determine whether there are any additional facts explaining the disparity. As described in the brief to Qwest's ROC II Application, Qwest has learned an important additional fact:

> [T]his higher percentage of service affecting troubles for line sharing is compounded by the fact that one prominent DLEC requests "future" repair work approximately 10% of the time. In other words, this DLEC will contact Qwest and ask Qwest to repair a problem at some designated time in the future, but not immediately. Currently, all of this waiting time is included in the mean time to restore (MR-6) and restoration intervals (MR-3 and MR-4), thereby creating the incorrect appearance that all of this repair time was attributable to Qwest. Qwest is analyzing whether it has the ability to exclude the time associated with the requested delay as "no access" time that is excluded from the performance data. For example, in April, this delay time increased the mean time to restore by about 13%.

Exhibit 3 describes how this issue impacted MR-6 in the month of April. A 13% reduction in mean time to restore would, in and itself, improve Qwest's data significantly. Even a cursory review of the data show that a 13% reduction would bring the MTTR into parity in several instances involving a technician dispatch. Moreover, troubles not requiring a technician dispatch ("No dispatch") contain the shortest restoration intervals and, therefore, a delay in correcting these troubles would create the largest disparity.

Nonetheless, Qwest is in the process of notifying CLECs through Change Management that it proposes to treat all line-sharing troubles as "out of service" subject to reporting in MR-3 and allowing for the higher priority in the repair queue because many of these troubles find the data service incapable of working, meaning the data is "out of service." It is anticipated that this issue will be discussed in the CMP meeting scheduled for July 17-18, 2002.

3. ***Describe Qwest's conditioned loop performance and whether the low volumes indicate a performance problem.***

Qwest commits to providing CLECs with conditioned loops within a standard interval of 15-days. Specifically, the ROC set benchmarks of 90% for meeting commitments (OP-3) with an average interval of 15-days or less (OP-4). For the five states in this application, the data show that where material demand exists Qwest is exceeding benchmarks, and that the aggregate performance for the 5 states is above the benchmark.

State[8]	Date	Conditioned Loops	Conditioned Loops Met on Time	OP-3 Results	OP-4 Results (days)
Colorado	Jan. 02	354	297	83.9%	5.4
Colorado	Feb. 02	220	196	89.1%	5.4
Colorado	March 02	195	188	96.4%	3.6
Colorado	April 02	194	187	96.4%	4.1
Colorado	Jan-April 02	963	868	90.1%	4.8
Idaho	Jan. 02	0	0	N/A	N/A
Idaho	Feb. 02	0	0	N/A	N/A
Idaho	March 02	1	1	100%	5.0
Idaho	April 02	5	4	80.0%	6.8
Idaho	Jan-April 02	6	5	83.3%	6.3
Iowa	Jan. 02	7	4	57.1%	6.4
Iowa	Feb. 02	6	4	66.7%	5.75
Iowa	March 02	8	2	25.0%	8.8
Iowa	April 02	10	9	90.0%	10.0
Iowa	Jan-April 02	31	19	61.3%	7.5
Nebraska	Jan. 02	2	0	0.0%	16.0
Nebraska	Feb. 02	1	1	100%	5.0
Nebraska	March 02	3	1	33.3%	11.7
Nebraska	April 02	1	1	100%	N/A
Nebraska	Jan-April 02	7	3	42.9%	11.2
N. Dakota	Jan. 02	1	0	0.0%	14.0
N. Dakota	Feb. 02	0	0	N/A	N/A
N. Dakota	March 02	3	1	33.3%	28.5
N. Dakota	April 02	2	1	50.0%	11.0
N. Dakota	Jan-April 02	6	2	33.3%	20.5
5 State Totals	Jan. 02	364	301	82.7%	
5 State Totals	Feb. 02	227	201	88.5%	
5 State Totals	March 02	212	194	91.5%	
5 State Totals	April 02	211	201	95.3%	
5 State Totals	Jan-April 02	1013	897	88.5%	

[8] The data in this document combines Zone 1 and Zone 2 and averages them together. The attached document disaggregates the zones into different categories.

This data shows an improving trend, with overall results going from 82.7% to 95.3% over the last four months. If May data were added, the four-month average for all five states combined would be well above the 90% benchmark. Thus, while the data in Idaho, Iowa, Nebraska and North Dakota vary due to low volumes, the overall picture shows that Qwest is consistently improving the percentage of conditioned loops it provides on schedule and performance has improved to the point that the overall data for the 5 application states has been above the 90% benchmark in each of the last 3 months, including May.

4. Resold Basic ISDN with "No Dispatch"

There have only been four such lines ordered in the five application states over the last four months. The regional data shows that Qwest consistently meets 100% of these orders, but misses the average installation interval in the "no dispatch" category. Even regionally, only 19 (no dispatch) resold basic rate IDSN lines that have been ordered in the last four months and 2 (dispatched) lines ordered over the last 4 months. Thus, this is not a product that the CLECs have had particular interest in. In its Pennsylvania decision, the FCC found that "[h]igh capacity loops . . . represent a small percentage of all loops ordered by competitors . . . . Given the relatively low volume of orders for high capacity loops compared to all loop types, we cannot find that [the BOC's] performance . . . warrants a finding of checklist noncompliance for all loop types."[9] The same is true of Basic ISDN lines in this application. There are so few ordered as to render the Qwest's performance irrelevant.

5. Resold Centrex 21 with no dispatch

This evidence shows that Qwest consistently provisions 100% of resold Centrex 21 lines without a dispatch on time; however, about half of the time, the average installation interval (OP-4C) is still outside of parity. This is a perfect application of the FCC's statement in its New Jersey decision, which found that "the average completed interval metric is not the most accurate measure of provisioning timeliness. . . . Instead we find that the missed appointment metric is a more reliable indicator of provisioning timeliness because it measures [the BOC's] performance in provisioning . . . at the scheduled time that competitive LECs request. We also find that performance under the missed appointment metric, unlike the average completed interval metric, cannot be skewed by competitive

[9] *In the Matter of Application of Verizon Pennsylvania Inc., Verizon Long Distance, Verizon Enterprise Solutions, Verizon Global Networks Inc., and Verizon Select Services Inc. for Authorization To Provide In-Region, InterLATA Services in Pennsylvania*, CC Docket No. 01-138, Memorandum Opinion and Order, ¶90 (Sept. 19, 2001).

LEC customers that request installation intervals beyond the standard interval." *New Jersey 271 Order* at ¶ 138.

Over the last four months, Qwest met 100% of its no dispatch commitments for Centrex 21 in Colorado, Iowa, Nebraska, and North Dakota. There is no data in this category in Idaho. Nonetheless, the average installation metric was outside of parity two of four months in Colorado and Nebraska, and all four months in Iowa. The average installation interval in North Dakota was at parity in each of the last four months. When the five states are combined together, the average installation is not in parity in three of the last four months. The longer intervals for CLECs in Colorado, Iowa and Nebraska are caused by a difference in order mix between CLECs and retail. Both CLECs and retail customers can obtain Centrex 21 "conversions" in a 5-day standard interval; however, Qwest offers a 3-day interval to CLECs and its retail customers for new line additions after initial service is established. On the retail side, 81% of all orders had 3-day intervals, but only 8% of CLEC orders had 3-day intervals. This difference in order mix drives the disparity.

Nonetheless, effective July 8, 2002, Qwest changed its process and offers CLECs a 3-day standard for all Centrex 21 orders that do not require a technician dispatch. Qwest retail will continue with a 5-day "Conversion" interval and the 3-day interval for new line additions after a conversion.

6. Resold DS-1 New Installation Service Quality

The OP-5 PID, "New Service Installation Quality," captures installation quality consistent with the defined methodology. However, this methodology has known limitations that overstate errors and understate service quality. Reported results reflect this downward bias. OP-5 was developed through extensive discussion during the ROC and Arizona workshops. The measurement was also addressed during TAG meetings and the Liberty Consulting Audit. The parties specifically discussed concepts about ordering and installation quality, reaching consensus on an OP-5 definition that captures all such situations that generate trouble reports (received within 30 calendar days following installation of inward lines), whether triggered by ordering issues or by installation errors. Liberty Consulting later reviewed Qwest's implementation of OP-5 and ultimately found it to generate accurate and reliable results.[10]

Although OP-5 successfully measures key installation quality parameters, the agreed upon definitions have inherent limitations that are well known. These limitations bias OP-5 to overstate errors and understate actual service quality. Liberty Consulting described these limitations in its Performance Measurements Audit Report ("PMA Report"), as follows:

[10] *Liberty Consulting's Final PMA Report* p. 66, ¶ 4(d) (Sept. 25, 2001) (hereinafter "PMA Report").

A. **"The number of trouble reports used in this measure is reported on a per-line basis, while the number of orders used in the measure is reported on a per-order basis."**[11]

Explanation: The denominator of OP-5 consists of the average number of orders for inward line activity installed in the current and previous month[12] – each of such orders can involve multiple lines – whereas trouble reports counted in the numerator of OP-5 are counted on the basis of trouble tickets that are submitted on a per-line or service basis.

B. **"[A] single installation order could involve multiple lines or circuits, and troubles could be experienced on separate lines or circuits within the first 30 days."**[13]

Explanation: A multiplying effect is created on top of the first point above whenever there are multiple lines or circuits per order. This increases the exposure of OP-5 results to multiples of volumes of trouble tickets, which are counted on a per-line or per-service basis, while the installation activity is counted on a per-order basis. This effect is further multiplied with DS1-level services and above, where each DS1 "line" has 24 circuits, each one of which is exposed to the possibility of separate trouble tickets. To the extent these effects exist, the result is to bias the OP-5 result downward.

C. **"A single-line installation could have multiple troubles within the first 30 days, and thus bias the OP-5 result downward."**[14]
Explanation: There can be multiple trouble reports in the 30 days following any installation activity. To the extent this happens, given that the measurement is to reflect the percentage of orders without trouble tickets,[15] the result is, using Liberty's expression, "to bias the OP-5 result downward."[16]

D. **"The number of new installations used in both the numerator and denominator of the formula for OP-5 is the average of the**

[11] *Id.* at p. 63, 3rd sub-paragraph, 2nd sentence.
[12] Per the OP-5 definition in PIDs (e.g., ROC 271 Working PID Version 5.0).
[13] *PMA Report* at p. 63, 3rd sub-paragraph, last sentence.
[14] *PMA Report* at p. 63, 3rd sub-paragraph, 4th sentence.
[15] *Id.* at p. 63, ¶2, 1st sentence.
[16] While this phenomenon is captured by the MR-7 Repeat Trouble Rate measurement, the ROC collaborative did not agree to exclude it from the OP-5 measurement.

current and prior months' inward orders including change orders for additional lines. The number of trouble reports used in the numerator is the total of all trouble reports closed during the reporting period and that were received within 30 days of the date of original installation."[17]

Explanation: That the provisioning aspect of the measurement is limited to inward line activity (and constitutes an arithmetic average of two months' installation activity), while the repair aspect of the measurement includes all trouble tickets within 30 days of an installation (from only the current month), means that trouble tickets counted in the numerator and the orders counted in both the denominator and the numerator are not, and cannot be, linked. Accordingly, the approved OP-5 PID does not call for such linkage. As a result, while the denominator of order volumes is limited to inward line activity, the trouble tickets counted in the numerator are not so limited.[18] This situation, again, biases the OP-5 result downward.

As noted, all of these items bias OP-5 results downward, which constitutes an *understating* of Qwest's OP-5 new service installation quality. As explained above, these issues make the OP-5 results for resold DS1 look worse than Qwest's actual performance.

7. Trouble Rate for Dark Fiber (MR-8)

On a 5-State level, the overall trouble rate (MR-8) for dark fiber has been perfect as the attachment shows.

On a regional (14-state) level, as of April 2002, Qwest had 63 dark fiber loops in service in its region. Of those, none had experienced a trouble in the last 12 months through April, 2002. The same is true of dark fiber transport (IOF). In April 2002, Qwest had 133 dark fiber transport facilities in place in its region. CLECs have only reported 6 instances of trouble in the last 12 months, and none in the last five months. Thus, while the volume of dark fiber is relatively low, CLECs have not experienced trouble once they are installed. Qwest's performance in this area is very strong.

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[17] *PMA Report* at p. 63, 2nd sub-paragraph, 2nd & 3rd sentences.

[18] Trouble tickets have coding that indicates whether trouble has occurred within 30 days of service installation, but no indication as to whether the installation activity was for inward lines or not. As a result, trouble tickets for feature-only orders, PIC changes, etc., are included in the numerator, while the corresponding orders are, per the PID, excluded.

Performance Results

Regional

December 2001 - May 2002

July 15, 2002

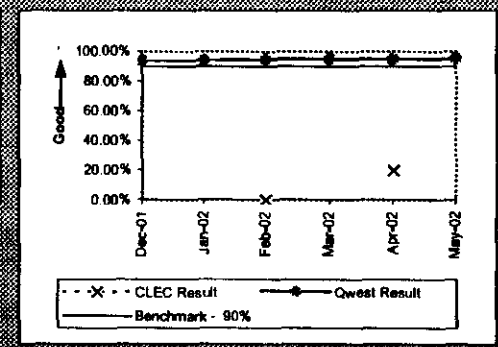
Table of Contents

Table of Contents

OP-3A - Installation Commitments Met (Percent) - Dispatches within MSAs

Unbundled Loop Analog (Benchmark)

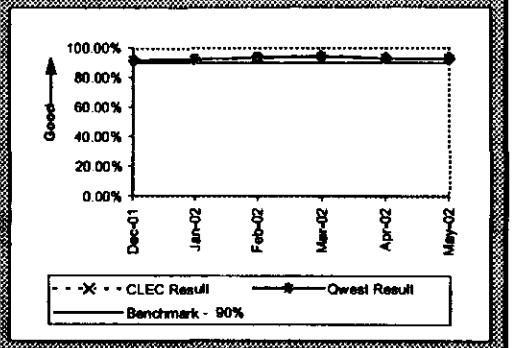
Date	CLEC Num	CLEC Denom	CLEC Result	CLEC PID Ex	CLEC Data E	Qwest Num	Qwest Denom	Qwest Result	Qwest Std De	Mod Z Scr	Parity Scr	Diff Signif?
Dec-01						21799	23248	93.77%	24.16%			
Jan-02						24241	25741	94.17%	23.43%			
Feb-02	0	1	0.00%	1	0	21362	22527	94.83%	22.15%	1.95	0.18	Yes
Mar-02						22381	23503	95.23%	21.32%			
Apr-02	1	5	20.00%	0	0	21873	23051	94.89%	22.02%	4.17	1.53	Yes
May-02						22996	24150	95.22%	21.33%			



OP-3B - Installation Commitments Met (Percent) - Dispatches outside MSAs

Unbundled Loop Analog (Benchmark)

Date	CLEC Num	CLEC Denom	CLEC Result	CLEC PID Ex	CLEC Data E	Qwest Num	Qwest Denom	Qwest Result	Qwest Std De	Mod Z Scr	Parity Scr	Diff Signif?
Dec-01						6496	7102	91.47%	27.94%			
Jan-02						6914	7482	92.41%	26.49%			
Feb-02						5892	6307	93.42%	24.79%			
Mar-02						6512	6892	94.49%	22.82%			
Apr-02						6205	6670	93.03%	25.47%			
May-02						7109	7617	93.33%	24.95%			



OP-3C - Installation Commitments Met (Percent) - No dispatches

Unbundled Loop Analog (Benchmark)

Date	CLEC Num	CLEC Denom	CLEC Result	CLEC PID Ex	CLEC Data E	Qwest Num	Qwest Denom	Qwest Result	Qwest Std Dt	Mod Z Scr	Parity Scr	Diff Signif?
Dec-01												
Jan-02	0	1	0.00%	0	2							Yes
Feb-02	1	1	100.00%	0	1							No
Mar-02	1	2	50.00%	1	3							Yes
Apr-02	5	12	41.67%	1	0							Yes
May-02	0	1	0.00%	0	3							Yes